

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

**1-12. (canceled).**

**13. (currently amended):** An isolated immunogenic, non-haemolytic *Actinobacillus pleuropneumoniae* (*App*) strain comprising at least one mutation in a transmembrane domain-encoding segment of the *apxIA* gene, and optionally at least one mutation in a transmembrane domain-encoding segment of the *apxIIA* gene, wherein the transmembrane domain-encoding segment in each *apxIA* gene and *apxIIA* gene corresponds either to nucleotides 886 to 945, to nucleotides 697 to 759, or to nucleotides 1105 to 1215~~only the A gene is mutated.~~

**14. (previously presented):** The strain of Claim 13, wherein said mutation is a deletion.

**15. (previously presented):** The strain of Claim 14, wherein said deletion is in a region of the *apxIA* gene which encodes a second transmembrane domain of the *App* ApxI exotoxin.

**16. (previously presented):** The strain of Claim 15, wherein said deletion is of nucleotides 886 to 945 of the *apxIA* gene.

17. **(previously presented):** The strain of Claim 16, wherein, said strain additionally comprises a deletion in a region of the *apxIIA* gene which encodes a second transmembrane domain of the *App* ApxII exotoxin.

18. **(withdrawn):** The strain of Claim 17, wherein said deletion is of nucleotides 886 to 945 of the *apxIIA* gene.

19. **(previously presented):** A vaccine composition against porcine pleuropneumonia comprising an immunogenically effective amount of the *Actinobacillus pleuropneumoniae* strain of Claim 13, and a pharmaceutically acceptable carrier, wherein the porcine pleuropneumonia is caused by *Actinobacillus pleuropneumoniae*.

20. **(withdrawn):** An immunogenic and non-haemolytic strain of *Actinobacillus pleuropneumonia* having the characteristics of that deposited in the Colección Española de Cultivos Tipo under registration number CECT 5985, or a mutant thereof.

21. **(withdrawn):** A vaccine composition against porcine pleuropneumoniae comprising an immunogenically effective amount of the *Actinobacillus pleuropneumoniae* of Claim 20; and a pharmaceutically acceptable carrier.

22. **(withdrawn):** An immunogenic and non-haemolytic strain of *Actinobacillus pleuropneumoniae* having the characteristics of that deposited in the Colección Española de Cultivos Tipo under registration number CECT 5994, or a mutant thereof.

23. **(withdrawn):** A vaccine composition against porcine pleuropneumonia comprising an immunogenically effective amount of the *Actinobacillus pleuropneumoniae* of Claim 22, and a pharmaceutically acceptable carrier.

24. **(withdrawn-currently amended):** A method for obtaining an immunogenic, non-haemolytic *Actinobacillus pleuropneumoniae* (*App*) strain comprising ~~the steps of:~~

(A) ~~—identifying transmembrane domains of Apx haemolytic and cytolytic exotoxins from a virulent *App* strain; and~~

(B) ~~—introducing a mutation in at least one region of the *apxIA* gene of said strain, and optionally in at least one region of the *apxIIA* gene of said strain, wherein each region encodes a transmembrane domain of the Apx haemolytic and cytolytic exotoxins, and wherein the transmembrane domain-encoding region in each *apxIA* gene and *apxIIA* gene corresponds either to nucleotides 886 to 945, to nucleotides 697 to 759, or to nucleotides 1105 to 1215.~~

25. **(withdrawn):** The method of Claim 24, wherein said mutation is a deletion.

26. **(withdrawn):** The method of Claim 25, wherein said deletion is in a region of the *apxIA* gene which encodes a second transmembrane domain of the *App* ApxI exotoxin.

27. **(withdrawn):** The method of Claim 26, wherein said deletion is of nucleotides 886 to 945 of the *apxIA* gene.

**28. (withdrawn):** The method of Claim 27, wherein said method additionally comprises introducing a deletion in a region of the *apxIIA* gene which encodes a second transmembrane domain of the *App* ApxII exotoxin.

**29. (withdrawn):** The method of Claim 28, wherein said deletion is of nucleotides 886 to 945 of the *apxIIA* gene.